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A REEXAMINATION OF
THE JOINT FORCE AIR COMPONENT COMMANDER (JFACC) CONCEPT
FOR THE 21ST CENTURY

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the Requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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15. Abstract: The U.S. military's Joint Force Air Component Commander (JFACC) construct is the current method of theater level air power employment. JFACC doctrine largely reflects U.S. Air Force history and procedures. Despite its successes, the JFACC concept has a number of problems. These include doctrinal mismatches among the services, additional layers in the chain of command, lack of responsiveness, and large manpower requirements. This paper examines those issues and proposes technological and organizational changes to the JFACC. These changes would result in a flatter, more networked organization that would give the Joint Force Commander (JFC) increased flexibility and effectiveness in theater air power employment.			
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Introduction:

In less than 100 years air power has grown from fledgling beginnings to become an integral component of modern warfare. The United States military uses the Joint Force Air Component Commander (JFACC) construct for the command and control of air power. The JFACC is the result of the U.S. Air Force and other air power advocates desire to centralize control of air power. These historical roots date back to the early uses of military air power in the First World War.

As we approach the 21st century, the U.S. military is undertaking an expansive self-examination to determine viable new operational concepts for the future. The opportunity for such rigorous self-examination comes from the strategic pause created by the demise of our only superpower enemy. Additionally, flat or declining defense budgets have made the status quo unaffordable. As the services, individually and collectively, evaluate future operational concepts such as "Forward...From the Sea", "Force XXI", and "Operational Maneuver From the Sea" it makes sense to reexamine the current JFACC to determine if the current concept meshes with future plans and capabilities. I believe that fundamental changes to the JFACC structure and processes are required and will improve the operational effectiveness of air power in the 21st century. This paper will examine the history and structure of the JFACC, identify some potential areas for improvement, and provide recommendations to improve the JFACC.

Background:

JFACC as it exists today is actually many things. The precise definition describes an individual, the commander of the joint air effort. In a looser context it can describe the distinct organization and staff that work for the JFACC. In its broadest sense the term

can also be used to describe the process by which the air power is employed at the operational level. This paper will touch on all three aspects of JFACC but will focus on the structure and process.

Our current JFACC represents the latest iteration of air power advocates' desire for centralized control of air power. This debate was in full swing by the end of World War I. Many Army officers felt that the role of the new air weapon should be in direct support of army ground units and as such should be controlled by the ground units that they supported. However, many airmen believed that airmen should centrally control air units. General Billy Mitchell, Chief of Air Service of the first American Army, demonstrated the effectiveness of the latter approach during the St. Mihiel Offensive of 1918.¹ He controlled the sequencing and targeting for nearly 1,500 aircraft creating enemy confusion and paralysis that contributed to the Allies' success.²

The debate between centralized versus decentralized control of air power continued throughout the 20th century. Not surprisingly the argument became particularly heated during periods of armed conflict. Proponents of centralized control of air power point to successes such as Air Marshal Tedder's control of Allied air forces in North Africa during World War II, and General George Kenney's skillful employment of air power in the Southwest Pacific theater during World War II.³ They also point out the problems that arise when air power employment is under decentralized control. Examples of such "misuse of air power" include air operations during the Korean and Vietnam Conflicts.⁴ These "misuses" were characterized by separate, uncoordinated air

¹ U.S. Air Force, JFACC Primer (Washington: 1992), 2.

² Ibid.

³ Ibid., 2-3.

⁴ Ibid. 4-5.

operations with different chains of command. Finally, proponents of centralized control of air power point to the U. S. led coalition's air campaign during operation DESERT STORM as a model of successful unity of effort in the employment of air power.⁵

Current:

Many manuals have been written about our current JFACC structure and processes. A detailed rehash of this information is both unnecessary and beyond the scope of this paper. However, it will be useful to review some of the basics. Current U.S. doctrine states that "unity of effort", "centralized planning" and "decentralized execution" are essential for the successful employment of all forces in combat.⁶ It goes on to say that "the Joint Force Commander (JFC) will normally designate a JFACC to exploit the capabilities of joint air operations", and if the JFC elects not to designate a JFACC, the JFCs staff will perform the JFACC functions using the same procedures that a JFACC would use.⁷

Current doctrine states that the JFACC will normally be "...the component commander having the preponderance of air assets and the capability to plan, task, and control joint air operations."⁸ The JFACC's responsibilities include, but are not limited to: developing a joint air operations plan, recommending to the JFC apportionment of the joint air effort, providing centralized direction for the allocation and tasking of forces, evaluating the results of air operations, and acting as the airspace control authority (ACA) and /or area air defense commander (AADC) when assigned by the JFC.⁹

⁵ Ibid., 5-8.

⁶ U.S. Joint Chiefs of Staff, Command and Control for Joint Air Operations (Joint Pub 3-56.1) (Washington: 1994), v.

⁷ Ibid., I-2, 3.

⁸ Ibid., II-2

⁹ Ibid. II-3

The JFACC accomplishes his or her responsibilities by generating a number of products including a master air attack plan (MAAP), air tasking orders (ATOs), airspace control plans (ACPs), and special instructions (SPINS).¹⁰ The MAAP is the overarching guidance for the air effort.¹¹ The ACP establishes theater-wide procedures for use and deconfliction of airspace. SPINS amplify existing directives with time sensitive updates. The ATO is the daily schedule of all air activity. An ATO is a formatted message that theoretically lists every scheduled and alert sortie in the theater. In reality, some activity such as maritime and helicopter logistics flights are not incorporated into the ATO. The ATO includes such information as flight composition, ordnance loadout, mission, routing, target assignment, in-flight refueling assignment, TLAM missions, and other data as required.

Once the MAAP and ACPs are published, the ATO becomes the focus of the JFACC staff. The ATO is a large, complex document that requires substantial time and effort to produce. ATOs are the result of a continuously ongoing cycle consisting of JFACC/component coordination, apportionment, target development, weaponeering and allocation, joint ATO development, force execution, and combat assessment. The time required to produce one ATO varies significantly depending on the nature of the air effort, but 48-72 hours is representative for a major effort. Normally, there are three ATOs in existence: today's, tomorrow's, and the day after tomorrow's.¹²

The JFACC's staff has 2 major components: combat plans and combat operations. Combat plans is tasked with producing the ATOs while combat operations concentrates

¹⁰ Ibid., II-4.

¹¹ U.S. Air Force doctrinal publications also refer to an air campaign plan but that terminology is inconsistent with operational art which considers air operations as part of the JFC's campaign plan.

¹² Joint Pub 3-56.1, IV-4-5.

on executing the current ATO. These groups are supported by an intelligence organization. Additionally, the JFACC relies on an organic support structure that includes administration, logistics, weather, communications, and numerous liaison officers from all of the joint aviation units to provide input to the process. The result of these requirements is a manpower and meeting intensive process that may consist of as many as 300-3000 people.¹³

Problems:

Strong points of the JFACC concept are that it provides for unity of effort in air operations, promotes efficiency through centralized planning and control, and provides the JFC with a single source for information and expert recommendations regarding air power employment. Proponents of the JFACC construct claim that it synchronizes the actions of air assets to achieve synergies that enhance the theater effort. Operations DESERT SHIELD and DESERT STORM highlighted the benefits of such synergies. The air operations were coordinated theater-wide to achieve the objectives of the JFC.

For all of its strengths, the current JFACC construct has some significant weaknesses. One is that it is based on concepts that contain some doctrinal mismatches between the services. Another issue is that designating and standing up a JFACC creates a new layer of bureaucracy and another link in the chain of command. Thirdly, the current JFACC is very manpower intensive because of its organization and liaison requirements. A fourth issue is whether a large, separate JFACC can provide the responsiveness necessary to meet emerging requirements on the fluid battlefield of the future. I will address each of these issues separately.

¹³ CDR Tom Deppe. Deppe.Tom@Jfacc.hurlburt.af.mil "FW: Command Centers" 12 January 1999, personal e-mail (12 January 1999).

Air power doctrine is very different between the services. These differences are rooted in the services' differing roles, missions, and histories. The U.S. Marine Corps is organized to fight as a combined arms task force whose air assets are integral to the operation. The U.S. Navy views air power as just one of many components of its Composite Warfare Commander (CWC) concept of operations. The U. S. Army considers its aviation assets to be for organic support. In contrast, the U.S. Air Force views air operations as the centerpiece of a joint operation and believes that all air assets should be placed under centralized control. Thus the individual services equip, train, and think about the application of air power in different ways. None of these ways is inherently superior or inferior, but the differences have caused difficulties in the past.

Not surprisingly, the U.S. Air Force incorporated its service vision into the JFACC doctrine. Thus U.S. Air Force doctrine for centralized control of air power has dominated the focus of the JFACC structure and processes. As a result, the other services are forced to operate under a system that doesn't fully reflect or appreciate their differing views on air employment. For all of its success, Operation DESERT STORM highlighted the difficulties caused by the preeminence of U.S. Air force doctrine in the JFACC construct.¹⁴ At one point, after the air war had started but prior to the beginning of the ground war, senior Army commanders were displeased with the apportionment of air operations. They wanted the air effort focussed on Iraqi ground units near the Kuwait and Saudi Arabian borders. The Air Force wanted priority to go to strikes against targets deep in Iraq. An example of Army frustration was evident when they complained that even though the Army followed JFACC target nomination procedures, by the end of

¹⁴ Marc Freitas and Thomas Parker, Joint Force Air Component Commander: A Common Sense Approach (Santa Monica: Rand, 1994), 8-10.

January only 202 of 1,185 Army targets had made it into the ATO and only 137 had been attacked.¹⁵ In, fact the JFACC functioned less as a joint organization and more as a service staff using service procedures.¹⁶ Navy and Marine Corps liaison elements never fully integrated and many issues remained unresolved.¹⁷ The responsibility for these difficulties rests with each of the services.

The second issue of concern with the current JFACC concept is that it adds another layer of bureaucracy to the chain of command. This is not a major problem if we as a military are content to operate with a traditional hierarchical command structure. On the other hand, if we want to become a flatter organization to improve speed of command, adding another layer to the organization may not be the best move. Additionally, as the JFACC concept has developed it has taken on a structural focus. Rather than a flexible concept that can be adapted as requirements change across the spectrum of joint military operations, setting up the JFACC can become the objective rather than the means of achieving one.¹⁸

The third issue is that the current JFACC organizations are very manpower intensive. As mentioned earlier, a JFACC staff might range anywhere from 300 – 3,000 people. A general rule of thumb is approximately 1/3 of those personnel would be in combat plans, 1/3 would be in combat operations, and 1/3 would be for the supporting functions such as intelligence, logistics, communications, etc.¹⁹ Additionally, many of these personnel are liaisons from the other components. These liaisons are experienced

¹⁵ Michael R. Gordon and General Bernard E. Trainor, The Generals' War: the Inside Story of the Conflict in the Gulf (Boston: Little, Brown and Company, 1995), 319-320.

¹⁶ Freitas and Parker, 9-10.

¹⁷ Ibid., 17.

¹⁸ Ibid.

¹⁹ Deppe, 12 January 1999.

warriors who help coordinate their component's contribution to joint air operations.²⁰ Although these liaison elements provide critical expertise, they create another problem. U.S. Navy and Marine Corps liaison officers are normally experienced aircrew who are assigned to the JFACC staff from operational units. Unfortunately, Navy carrier air wings and squadrons and Marine squadrons are not manned at a level that allows excess personnel to be available for such tasking. Thus any liaison requirements decrease the number of available aircrew to fly missions. This impacts a unit's performance in sustained operations. Additionally, liaison requirements are extensive because of limited opportunities for junior officers to get comprehensive joint exposure at the tactical level.

The final issue that I will address is responsiveness. The germane question is whether a large, distinct JFACC organization can adjust the air operation quickly enough to succeed on the fluid battlefield of the future. Operation DESERT STORM highlighted some of these difficulties. Vice Admiral Arthur, the senior Navy commander, criticized the inflexibility of the targeting process.²¹ The Navy nominated targets were not making it into the ATO. More importantly, Vice Admiral Arthur believed that the Iraqis had figured out that the U.S. targeting process took three days because his intelligence showed that they were moving their remaining planes after one day.²² Thus the Iraqis were able to capitalize on the JFACC's response time requirements to protect their mobile assets.

Currently, the JFACC reacts to emerging requirements in one of several ways. One is to reassign missions to aircraft that are already airborne. This is a tenuous

²⁰ Joint Pub 3-56.1, II-7

²¹ Gordon and Trainor, 320.

²² Ibid.

solution since it takes away from other already scheduled missions. Additionally, difficulties in providing new mission information to the aircrew as well as possible ordnance loadout incompatibilities increases risk and makes this a less than optimum answer. Another method is to task some number of alert sorties, both airborne and on the ground or flight deck. This provides response capability but decrements the sorties for other apportioned tasks. Some amount of retasking of assets is incumbent in any air operation. However, we are forcing ourselves to do more of this than necessary by operating a JFACC system that may nominally require 48 hours from target nomination to target destruction.

Proposed Changes:

I will now examine some recommendations to address the issues raised in the previous section. These recommendations come in two broad categories. The first are technologically oriented and the others have an organizational focus. The technology-based options include applying information technology and communication systems to change the way JFACC operates. Organizationally, I will propose changing from a service oriented JFACC to a more functionally oriented JFACC. One of the strong points of these proposals is that they could be evaluated and adjusted through command post exercise as well as modeling and simulation which is significantly more cost effective than large scale live exercises. The goal of such changes would be to create a more effective way to plan and control air operations.

The duties that the current JFACC performs could be folded into the JFC's staff. Most of the decisionmaking and final approval is done there now anyway. Other JFACC duties are primarily administrative and deconfliction. These tasks could be automated

with software containing rule sets. Rule sets are a series of conditions and actions that enable the automation of repetitive tasks.²³ Liaison between components throughout the chain of command would be done electronically. Compared to current numbers, the JFC would rely on a very small nucleus of personnel to help him make air power employment decisions. Decision implementation would be done automatically and electronically. The need for a large, distinct JFACC as we now know it could be eliminated.

Information technology is fundamentally changing the world. Advances in computing and communications have significantly altered the economic landscape. Organizations that have taken advantage of these advances have thrived while those that stayed rooted in the past have struggled to survive. This trend is most evident in the business world. Companies, like Wal-Mart, that made information the focus of their operations have leveraged the capabilities into competitive advantage.²⁴ Vice Admiral Cebrowski and Mr. John Garstka advocate that their "Network-Centric" approach will also revolutionize warfare and that militaries that adopt it will achieve a considerable advantage over their opponents who do not.²⁵

Some critics claim that although "Network-Centric" operations may be the path to success in the business model, they are not applicable to warfare. This debate is ongoing and contentious, but for our purposes the relevant fact is how does the business model apply to the JFACC. Although the JFACC is a component of a warfighting organization, much of its effort is on production and coordination. The JFACC must turn out a specific

²³ David Coleman and Raman Khanna, eds., Groupware: Technology and Applications (Upper Saddle River, NJ: Prentice Hall, 1995), 235.

²⁴ VADM Arthur K. Cebrowski and James J. Garstka, "Network-Centric Warfare-Its Origins and Future," U.S. Naval Institute Proceedings, January 1998, 30.

²⁵ *Ibid.*, 28-35.

number of products on a rigid schedule. This activity certainly does parallel the business model.

A key technological enabler to success in an information-dominated world is groupware. Groupware is a broad term used to describe the collection of technologies that support interpersonal communication and collaboration.²⁶ Examples include decision support systems, audio and video conferencing, electronic mail, scheduling, editing systems, and production scheduling. These are all impressive tools, but the key to success is how they are used. Many experts agree that simply adding groupware to an existing traditional hierarchical organization seldom achieves the desired results. On the other hand, organizations that alter their structure to capitalize on the potential gains of groupware are more likely to realize the full benefit.²⁷

The JFACC staff performs their functions in an operations center. These operations centers have become very sophisticated. Computers are central to the process and large databases contain detailed information about every aspect of the air effort. Additionally, communications systems have made tremendous advances in recent years. As recently as Operation DESERT STORM, incompatibilities between the Air Force and the Navy communications systems made it impossible to receive the ATO aboard ships at sea. The solution to this dilemma was to fly a paper copy of the ATO out to each aircraft carrier daily. Obviously this was less than optimum. Today, most of these problems have been fixed to the point that not only can the JFACC generated products be sent to ships electronically, but also JFACCs have successfully run air operations from aboard Navy ships both during exercises and real world operations.

²⁶ Coleman and Khanna, 3-4.

²⁷ Ibid., 34-35.

Yet for all of its sophisticated communications and computers, the basic structure of the JFACC staff has only changed slightly. To capitalize fully on technology the JFACC staff structure should be reevaluated and reengineered. One example would be the liaison requirements. If real-time communications with operational units exists, why do we need to take personnel away from them to sit in the air operations center? Certainly the same information exchange could be done electronically. The Contingency Theater Automated Planning System (CTAPS) architecture already allows a degree of collaborative planning and follow-on systems such as Theater Battle Management Core System (TBMCS) that will be fielded in 1999 will have even more capability. We must stop viewing these systems as "gee-whiz" gadgets and adapt our processes to take full advantage of the capabilities that these new tools offer. Another example is the number of meetings that take place to produce just one ATO. Certainly there are some critical issues that are best decided with face to face human contact, but much of the production cycle involves bulk manipulation of purely administrative data. Conducting most of the data manipulation electronically and automatically via rule sets would substantially reduce the number of required meetings.

As I mentioned, organizational changes are also keys to success. Management expert Peter F. Drucker illustrates this point by comparing traditional businesses with information-based organizations. He asserts that hierarchical organizations are able to eliminate whole layers of management whose main function has been to serve as relays of information rather than as decision-makers or leaders. Information-based organizations require more specialists than traditional hierarchical organizations, but the specialists are located in operations at the tactical level rather than headquarters.

Although some central staff is necessary, it decreases substantially.²⁸ Such a staff reduction would facilitate retaining JFACC functions within the JFC organization.

Applying this concept to the JFACC staff could be interesting. If we could rely on specialists for the expertise on specific platform and unit capabilities and limitations, and they were linked electronically to the AOC, then they could remain with their units. For example, rather than have an O-3 or O-4 assigned to temporary duty on the JFACC staff in the AOC, let him remain in his squadron or on the wing staff. When an issue arises that requires the specific expertise that he could provide, the JFACC electronically queries all subordinate units simultaneously. With this approach, the JFACC instantaneously has access to all of the expertise that a specific community, i.e. what B-1s or F/A-18s brings to the operation. Equally significant our liaison officer is able to remain in his unit and fly missions that contribute to the effort.

Currently, the majority of assignments that qualify an officer for Joint Duty are on staffs. As a result, knowledge of how the other services operate is gained in a staff environment. Jointness is the way of the future, so it would make sense to increase the opportunities for officers to earn joint credit at an earlier opportunity and to expand those opportunities to the operational forces. For example, in my last assignment, our squadron had an exchange pilot from the U.S. Air Force. His contributions were critical to our successful interoperability during both exercises and deployed operations in Bosnia and Southwest Asia. His advice was sought by flag officers from both services. In fact, he was so valuable that our squadron said, only half joking, that a U.S. Air Force exchange pilot is like an American Express card, "you shouldn't leave home without one."

²⁸ Peter F. Drucker, "The Coming of the New Organization," in Revolution in Real Time (Boston: Harvard University Press, 1991), 5.

Unfortunately, this individual did not get joint duty credit even after three years of living and deploying with a sister service because he was an O-3, and the billet was in a squadron rather than on a staff.

This program should be expanded so that many officers have an opportunity to serve an operational flying tour with one of the other services and get credit for the experience. This would provide a much larger corps of pilots who understand more than just their corner of the air effort. This change in culture would also help to decrease the liaison officer requirements while increasing each unit's ability to self-synchronize. The increased knowledge sharing of an information-based organization would also improve the responsiveness of the JFACC.

Counterarguments:

U.S. Air Force proposals to improve the JFACC organization do include technology application. Unfortunately many of them miss the mark organizationally. For example, one idea examined during the U.S. Air Force's Joint Expeditionary Force Exercise (JFX '98) is to use information technology to link two operations centers together. This would enable the U.S. Air Force to have a smaller group of personnel deploy as a "JFACC forward" while connected to a core group of expertise left behind at headquarters as a "JFACC rear". This proposal keeps the total number of personnel roughly the same and increases the communication requirements with the only benefit being reduced footprint for lift requirements. Thus, this is simply applying technology to the existing process rather than using technology as an enabler for new operational concepts.

A criticism of the netted approach to JFACC that I have proposed is that it assumes that a reliable theater-wide communications architecture will exist and would be unable to function if it degraded. This argument is invalid on two counts. One is that we are approaching a time when reliable theater-wide communications architecture will normally be available. In fact, optimists would say that we will see this on a global scale in the not too distant future. Secondly, using a more networked approach combined with improved interservice interoperability will improve synchronization. This improved synchronization would enable units as small as the wing or squadron level to continue to execute their portion of the air effort even if communication with higher headquarters were unavailable for a period of time. In fact, our proposed flatter information based JFACC should be more effective in a degraded command and control environment than the traditional hierarchical structure of the current construct.

Conclusion:

Air power is a key component of modern joint warfare. The U.S. military has adopted the JFACC concept for the application of air power. JFACC in its current incarnation is largely the product of U.S. Air Force desires and doctrine. The current structure is effective as evidenced in notable successes such as the air operations in Operation DESERT STORM. However, for all its success there is potential for improvement.

Perhaps it's time to consider the current JFACC construct as an interim approach that was necessary until the required information and communications technology became available. Adapting the organization to capitalize on such technology would enable the JFACC to be restructured with a more functional vice service approach. The

organization could become significantly smaller through automation using rule sets.

Automation and netted liaison would decrease manpower requirements. This decrease in size would also facilitate making the JFACC concept more flexible and responsive to the various component commanders. It could be tailored specifically for each operation. As the services explore new operational concepts for the 21st century, the time is ripe for evaluation and experimentation with the JFACC construct. The end result will be a smaller, flatter, and more functionally oriented JFACC process that will actually provide the JFC with the capabilities that today's doctrine promises.

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